WHAT IS CLAIMED IS:

1. A non-woven filter cartridge comprising:

a cylindrical core member;

a first cylindrical mass of essentially continuous, intertwined, and thermally bonded polymer filaments adjacent to the core member, the polymer filaments of the first mass having diameters of less than about 1.5 microns;

a second cylindrical mass of essentially continuous, intertwined, and thermally bonded polymer filaments adjacent to the first mass of polymer filaments, the polymer filaments of the second mass having diameters greater than about 1.5 microns;

wherein the filter cartridge has an efficiency in removing 1 micron particles greater than or equal to at least about 99.9%, and wherein a pressure drop across the filter cartridge is less than about 3 pounds per square inch for every gallon per minute of flow through a 10 inch long section of the filter cartridge.

2. The non-woven filter cartridge of claim 1 wherein the filaments of the first mass have diameters less than about 1 micron.

3. The non-woven filter cartridge of claim 1 wherein the filaments of the second mass have diameters ranging from about 4 microns to about 10 microns.

4. The non-woven filter cartridge of claim 1 wherein the pressure drop across the filter cartridge is about 1.5 pounds per square inch for every gallon per minute of flow through the 10 inch section of the filter cartridge.

5. The non-woven filter cartridge of claim 1 wherein the first mass of polymer filaments comprises a first filament zone and a second filament zone, the first filament zone defining a calendered layer having a density of filaments which is substantially greater than that of the second filament zone.

6. The non-woven filter cartridge of claim 5 wherein the first filament zone is adjacent to the core.

7. The non-woven filter cartridge of claim 6 wherein the calendered layer has a thickness of about 5 mils.

8. The non-woven filter cartridge of claim 7 wherein the second filament zone and the second cylindrical mass are each substantially thicker than about 5 mils.

9. The non-woven filter cartridge of claim 1 further comprising:
a transition region including filaments from the first mass intertwined with filaments from the second mass.

10. The non-woven filter cartridge of claim 1 including a density gradient between the first filament mass and the second filament mass.

11. A non-woven filter cartridge comprising:

a cylindrical core member;

a first cylindrical mass of essentially continuous, intertwined, and thermally bonded polymer filaments positioned over the core member, the first mass of polymer filaments comprised of filaments having a diameter of less than about 1.5 microns, wherein a portion of the first mass of polymer filaments forms a calendered layer positioned adjacent the core member; and

a second cylindrical mass of essentially continuous, intertwined, and thermally bonded polymer filaments disposed over the first mass of polymer filaments, at least some of the polymer filaments in the second mass being intertwined with some of the polymer filaments in the first mass, the second mass of polymer filaments comprised of filaments having a diameter of greater than about 1.5 microns;

wherein the filter cartridge has an efficiency in removing 1 micron particles of at least about 99.9% and wherein a pressure drop across the cartridge is less than about 3 pounds per square inch per gallon per minute of fluid flowing through a 10 inch long section of the filter cartridge.

12. The non-woven cartridge of claim 11 wherein the filaments of the first mass have diameters of between about 0.5 microns and about 1 micron.

13. The non-woven filter cartridge of claim 11 wherein the filaments of the second mass have diameters ranging from about 4 microns to about 10 microns.

14. The non-woven filter cartridge of claim 11 wherein the filaments of the second mass have diameters larger than the diameters of the filaments of the first mass.

15. The non-woven filter cartridge of claim 11 wherein the calendered layer has a thickness of about 5 mils.

16. The non-woven filter cartridge of claim 15 wherein the second cylindrical mass is substantially thicker than about 5 mils.